

CLAIMS

1 1. A nuclear detection and measurement system comprising
2 an ionization chamber, said chamber having a plurality of
3 sidewalls, one of said sidewalls having a window, said
4 ionization chamber having enclosed therein an electrometer,
5 said electrometer being a balanced electrometer.

1 2. The system according to claim 1 which includes a
2 housing, said housing enclosing said ionization chamber,
3 said housing also enclosing circuitry, a battery, a power
4 source, a microprocessor, and an analog section, said
5 analog section being intermediate and connected by
6 circuitry to said ionization chamber and said
7 microprocessor, said housing also having a display panel,
8 and an on/off switch, said circuitry connecting said power
9 supply to said battery, said on/off switch, said
10 microprocessor, and said display panel.

1 3. The system according to claim 2 wherein said housing
2 also includes a wireless link, a GPS unit, an RS232 port, a
3 USB port, an alarm, and a battery charger.

1 4. The system according to claim 2 which includes a
2 handle secured to said housing, said housing having on its
3 exterior a plurality of connections for said RS232 port,
4 said USB port, and said battery charger, and a point of
5 attachment for a bar code reader.

1 5. The system according to claim 1 wherein said
2 ionization chamber is enclosed in a housing, said housing
3 having on its exterior a display panel having digital and
4 bar graph displays, said display panel displaying both dose
5 rate and dose.

1 6. The system according to claim 1 wherein said
2 ionization chamber includes a multi-range switch.

1 7. The system according to claim 1 wherein said
2 ionization chamber encloses a second ionization chamber,

3 said second ionization chamber having enclosed therein a
4 second electrometer.

1 8 The system according to claim 7 wherein second
2 electrometer is a balanced electrometer.

1 9. A nuclear detection and measurement system comprising
2 an ionization chamber, said ionization chamber having
3 enclosed therein a balanced electrometer.

1 10. The system according to claim 9 which includes a
2 housing, said housing enclosing said ionization chamber,
3 said housing also enclosing circuitry, a battery, a power
4 source, a microprocessor, and an analog section, said
5 analog section being intermediate and connected by
6 circuitry to said ionization chamber and said
7 microprocessor, said housing also having a display panel,
8 and an on/off switch, said circuitry connecting said power
9 supply to said battery, said on/off switch, said
10 microprocessor, and said display panel.

1 11. The system according to claim 10 wherein said housing
2 also includes a wireless link, a GPS unit, an RS232 port, a
3 USB port, an alarm, and a battery charger.

1 12. The system according to claim 11 which includes a
2 handle secured to said housing, said housing having on its
3 exterior a plurality of connections for said RS232 port,
4 said USB port, and said battery charger, and a point of
5 attachment for a bar code reader.

1 13. The system according to claim 9 wherein said
2 ionization chamber is enclosed in a housing, said housing
3 having on its exterior a display panel having digital and
4 bar graph displays, said display panel displaying both dose
5 rate and dose.

1 14. The system according to claim 9 wherein said
2 ionization chamber includes a multi-range switch.

1 15. The system according to claim 9 wherein said
2 ionization chamber encloses a second ionization chamber,

3 said second ionization chamber having enclosed therein a
4 second electrometer.

1 16. The system according to claim 15 wherein said second
2 electrometer is a balanced electrometer.